

NATIONAL AVIATION UNIVERSITY
FACULTY OF CYBERSECURITY, COMPUTER AND SOFTWARE
ENGINEERING
SOFTWARE ENGINEERING DEPARTMENT

Laboratory Work № 3

“Basic elements of Graphical User Interface”

Variant № 7

Prepared by:

Andrii Vynarchuk

Student of SE-226A

Checked by:

Oleksandr Shapoval

Kyiv 2022

Goal: *familiarize yourself with basic elements of every Graphical User Interface and explore their creation.*

Execution Order

1. Learn basic elements of GUI.

2. Create an interface as shown in Fig 1.1 using any of the technology stack. You can create nterface for desktop (Windows, Linux or MacOS), web or mobile (iOS, Android) application. Requirements to the interface:

- At the top of the form there is the Enter a Message editing field for entering a message, which will be displayed in a pop-up window when the Show Message button is clicked.
- Below are two buttons that fill the editing field with two different default messages 'Default Message 1' button shows message 'This is my default message', and 'Default Messages 2' button shows message 'This is another default message'.
- Below, the drop-down list contains a list of actions that will be executed within this application:
 - 'Clear field' will clear edit field above
 - 'Copy text' will copy message from edit field above to buffer
 - 'Paste text' will paste any data from buffer to edit field above

Selecting a row from the list and pressing the 'Execute' button will perform the action.

- Next are two groups of checkboxes that relate to the controls at the top. The left set ofnEnable Actions checkboxes enables or disables each group of controls above. The right set of Show Actions checkboxes makes each group of controls hidden or not.

- The Exit button closes the application (for desktop or mobile apps) or closes the tab (for web app)

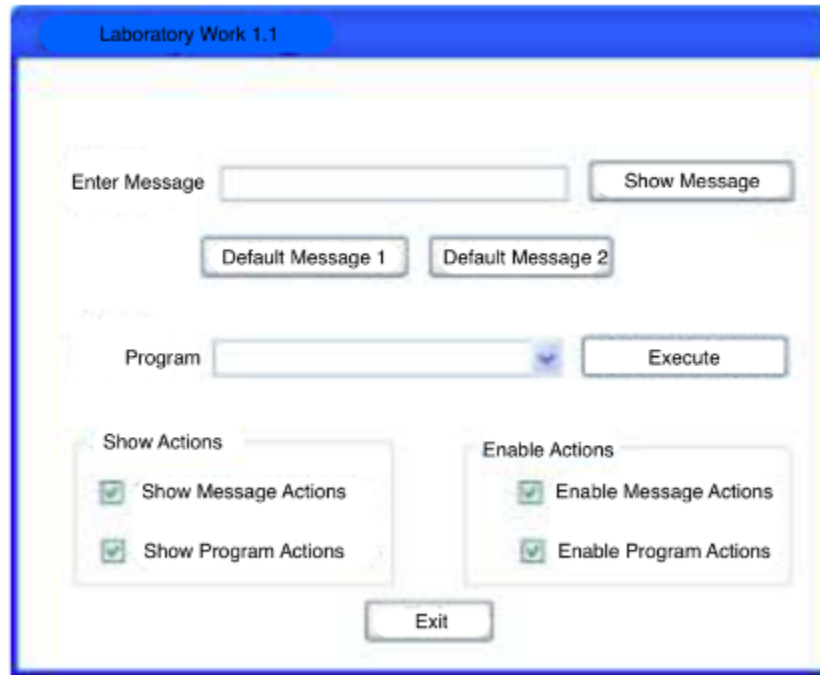


Fig. 1.1 Interface Prototype

3. Add the required code to the 'Default Message 1' and 'Default Message 2' buttons so that the text field acquires the value 'This is my default message' and 'This is another default message' correspondingly.
4. Add the required code to enable or disable (show or hide) controls on the interface.
5. Extend the code so that the user can add its own commands to drop-down list.
6. Add to the created interface the execution of the function according to your variant

Individual task by variant

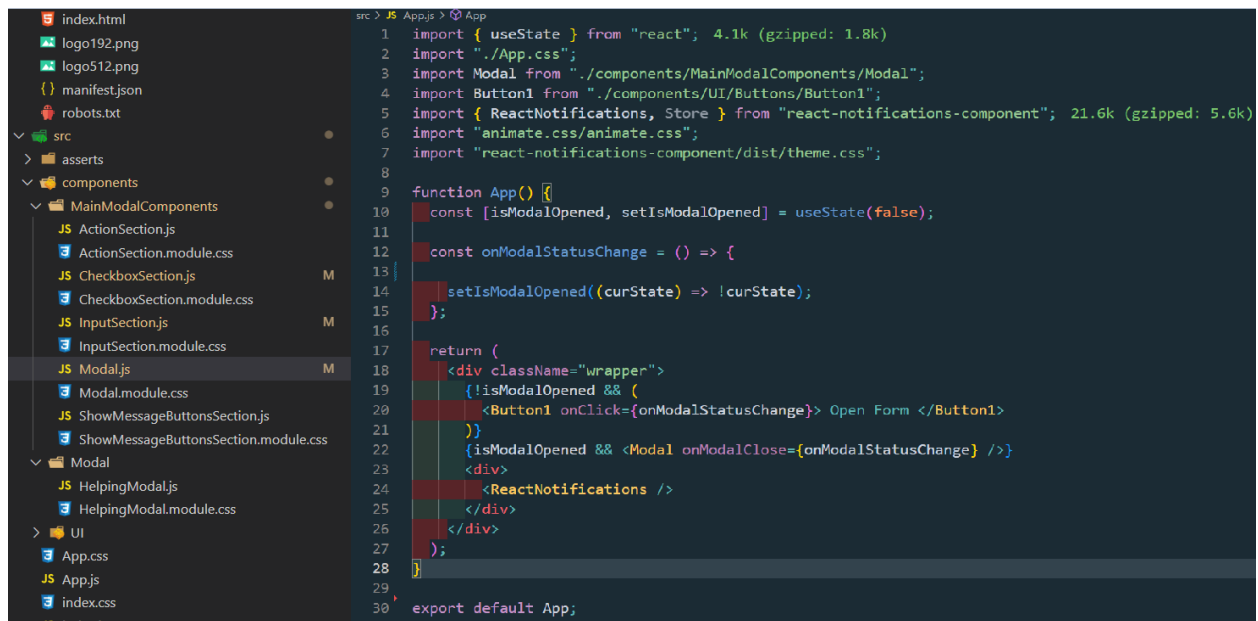
7	Add the 'Visible?' and 'Enabled?' buttons to the dialog window, when clicked, a check is made to see if the text fields are available, and corresponding messages are issued in the pop-up window.
---	--

Project code

The project is written in JavaScript library React and other JavaScript libraries. Project has dynamic typification (without TypeScript).

The main concept of React demands separation, so the project architecture is divided and large enough to take it into this report. So source code is at my [Github repository](#) and here I leave some parts of it. The hosted example of [web application can be found using this link](#).


1. Project architecture (left) and App component (right).



2. Some part of main Modal (the biggest and most loaded component)

```
src > components > MainModalComponents > JS Modal.js > ModalContent
131   return (
132     <article className={classes.article}>
133       <Card>
134         <h2 className={classes.title}> ...
137       </h2>
138       <form>
139         <InputSection
140           value={messageValue}
141           onChange={onMessageValueChange}
142           onValueShow={manageMessageShow}
143           isButtonDisabled={settings.showMessageActions}
144           isInputDisabled={settings.enableMessageActions}
145         />
146         <ShowMessageButtonsSection
147           onDefaultSet={onDefaultValueCall}
148           isButtonDisabled={settings.showMessageActions}
149         />
150         <ActionSection
151           onSending={reducerControl}
152           onExecute={onExecuteHandler}
153           isButtonDisabled={settings.showProgramActions}
154           isDropMenuDisabled={settings.enableProgramActions}
155         />
156         <CheckboxSection
157           onSending={reducerControl}
158           onCheckBoxCheck={onCheckboxesStatusHandler}
159         />
160         <Button2
161           alternative="Don't leave us, pleasee :)"
162           onClick={onModalClose}
```

3. Project execution

 It's just first lab on GUI 0_0

Enter your message

Show message

Default message 1

Default message 2

Actions

Execute

☐ Show message actions

☒ Enable message actions

☐ Show program actions

☒ Enable program actions

Exit

Checkbox status
All inputs aren't enable!

Default value was set!
This is another default message

Default value was set!
This is my default message

Links repeat (if links above doesn't work):

GitHub Source Code: <https://github.com/De-Real/HCI-lab1>

Deployment web app: <https://de-real.github.io/HCI-lab1/>

Conclusions. *I got familiarization of myself with basic elements of every Graphical User Interface and explore their creation.*